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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,603	02/19/2002	Takemi Hasegawa	50395-134	2299

20277 7590 08/18/2004

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EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,603

Applicant(s)

HASEGAWA ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

See the same objection in the previous Office action. Claim 16 is not further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa 6526209 in view of Fajardo (WO/16141), Turpin 5167684, and/or Fleck 3622291 .

Hasegawa discloses the invention as claimed, except for the limitation of controlling the pressure by using a pressure-controlling device. It is well known to control pressure within a hollow preform, so as to maintain the bores in the final fiber. See: Fajardo (col. 12, lines1-18) teaches to insure proper control of the holes, pressure is applied to the cores. Turpin (col. 3, lines15-20) teaches that one cannot control the

size of the of the bores. And Fleck (col.1,lines 49-57, and elsewhere) teaches that without the differential pressure technique, the channels will collapse.

It would have been obvious to control the pressure inside the Hasegawa bores, so that one can create a fiber with controlled channel size – as is the known process for drawing hollow glass objects. It would have been obvious to provide a device to control the pressure, because it would have been easier than doing it by hand.

The forming of the holes is disclosed at col. 4, lines 55-59 of Hasegawa and line 1 of col. 2 discloses the drawing. As to heating and drying: See col. 4, lines 64-67 (Hasegawa) which discloses the well-known problem of water/OH causing absorbing light. It would have been obvious to remove all water from the preform – it would have been further obvious to use heat – since heat is a well known expedient for drying things.

Claim 3 and 5: see col. 4, lines 61-64 of Turpin and page 12, lines 6-7 of Fajardo. It would have been obvious to not have any water in the tube because it is detrimental.

As to claim 4: As indicated below, there is no antecedent basis for “the holes” claim 3 refers to “one or more”. It would have been obvious to repeat the claim 3 process multiple times so as to make as much fiber as possible. This will result in many holes and repeating.

Claim 7: it would have been obvious to have a dry a gas as possible because water is a detrimental contaminant.

Claim 12: it would have been obvious to smooth out the holes if the holes were not round as intended.

Claim 14 is clearly met.

Claim 15: it is deemed that Hasegawa's "boring" is synonymous with the claimed drilling.

Claims 1-9, 12, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa 6526209 in view of Fajardo (WO/16141), Turpin 5167684, and/or Fleck 3622291 and further in view of Berkey 5152818.

Claim 1: In addition to the above rejection: Berkey teaches to dry with heat: col. 7, lines 21-22.

As to claim 2: Berkey (col. 2, lines 21-24) teaches to use a dry air to dry hollow preforms. It would have been obvious to use the Berkey process to dry the preform using a dry gas because such facilitates drying. As to a drawing tower: first a drawing tower does not impose much (if any) structural limitation (patentable weight) to a claim – because a "drawing tower" just conveys an intended use (i.e. drawing). As far as examiner is aware there is no universal characteristic for drawing tower, other than it being some sort of tower. Regardless, it would have been obvious to perform all of the steps within a single tower/apparatus so that one would not have to transfer the preform.

Claim 6 it would have been obvious to perform routine experimentation to determine the optimal temperature. It is well known that higher temperatures are more effective for drying.

Claims 8-9: see how the claim was treated in the previous Office action.

Claims 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa 6526209 in view of Fajardo (WO/16141), Turpin 5167684, and/or Fleck 3622291 and further in view of Berkey 5152818 as applied to claims 2-3 above, and further in view of Yokota 4793842.

Yokota is used as in the prior Office action – to show it is known to use active species to reduce hydroxyl/water content of preforms since such is a detrimental contaminate. It would have been obvious to use some chlorine or other gas to aid removal of water.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 8: there is no antecedent basis for "said preform using a pressure-controlling device". Line 3: there is no antecedent basis for "said one or more holes in a preform"; the preamble refers to holes in a fiber but not to holes in the preform.

Claim 4 and 12-16: there is no/confusing antecedent basis for "the holes". Claim 1 does not require that there must be more than one hole. (claim 14 see line 9)

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

It is argued that high temperatures promotes diffusion of water into glass. No evidence was supplied to support this assertion. It is noted that any such evidence that is submitted will be considered in viewing whether such would result in a non-enablement issue because it would cause water diffusion into Applicant's glass.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

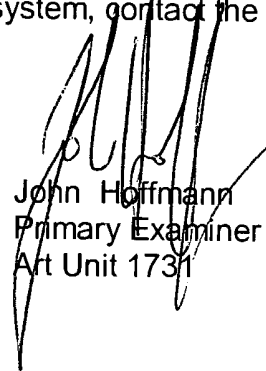
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

g-16-04

jmh